

Appl. No. 10/650,504
Amtd. Dated September 21, 2007
Reply to Office Action of June 26, 2007

Attorney Docket No. 81872.0052
Customer No.: 26021

REMARKS

This application has been carefully reviewed in light of the Office Action dated June 26, 2007. Claims 13-14, 20-21 and 24-26 remain in this application. Claims 13 and 20 are the independent Claims. Claims 13, 20 and 24 have been amended. Support for the amendments to Claims 13 and 18 is found, *inter alia*, on page 6, lines 2-3 of the specification. Claims 1-12, 15-19 and 22-23 have been cancelled, without prejudice. It is believed that no new matter is involved in the amendments or arguments presented herein. Reconsideration and entrance of the amendment in the application are respectfully requested.

Allowable Subject Matter

On page 5 of the Office Action, Claim 24 was indicated to be allowable if re-written in independent form including all of the limitations of the base claim and any intervening claims. Applicant has rewritten this claim to provide more clarity to the subject matter that the Applicant regards as the invention of this claim. An interview with the Examiner was conducted as to the allowability of the revised claim, which was confirmed in an e-mail from the Examiner to Mr. Aniket Patel on July 26, 2006.

Applicant thanks the Examiner and formally recognizes the allowable subject matter of Claim 24.

Art-Based Rejections

Claims 13-14 were rejected under 35 U.S.C. § 103(a) as obvious over U.S. Patent No. 3,982,976 (Marciniec) in view of U.S. Patent No. 5,503,881 (Cain). Claims 20-21 and 25-26 were rejected under § 103 (a) over Marciniec in view of U.S.

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Paent No. 5,417,798 (Nishibayashi) or U.S. Patent No. 4,810,322 (Gut). Applicant respectfully traverses the rejections and submits that the claims herein are patentable in light of the clarifying amendments above and the arguments below.

The Marciniec Reference

U.S. Patent No. 3,982,976 (Marciniec) concerns evaluation of the cleanliness of silicon wafers (*Id. at col. 2, lines 13-18*). Marciniec discloses a technique for observation of textured patterns by exposing silicon wafers to reactive plasma, in order to inspect contaminants and residues that are undesirably remaining on a substrate of the silicon wafers (*See, Marciniec, col. 1, lines 17 to 20*).

According to Marciniec, textured patterns are formed on silicon wafers for evaluating contaminations and residues that exist on the silicon wafers (*Id., col. 1, lines 15 to 51*). Marciniec discloses that the contaminants and residues include photoresists and inorganic and organic contaminants and residues (*Id., col. 1, lines 48 to 51*).

The Cain Reference

U.S. Patent No. 5,503,881 (Cain) discloses a fluid distribution head for improved plasma processing system. (*See, Cain, Abstract*.) Referring to Figs 1 to 3, Cain provides a plate 92 that is a ground electrode with the opening portions functioning as gas inlets (*See, Cain, Fig. 1*)

The Nishibayashi Reference

U.S. Patent No. 5,417,798 (Nishibayashi) discloses a reactive method of etching diamond using oxygen plasma. (*See, Nishibayashi, Abstrascit*.)

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The Claims are Patentable Over the Cited References

The present application is generally directed to a management method for storage units in information processing systems.

As defined by amended independent Claim 13, a method for producing a solar cell includes placing a substrate for a solar cell on an electrode inside a chamber. The substrate is covered with a plate. The plate is provided with a number of opening portions. Textures are formed on a surface of the substrate by using residues generated during etching and being chiefly composed of components of the substrate as an etching mask. A distance between the substrate and a surface of the plate opposing the substrate in a peripheral portion of the plate is set shorter than a distance between the substrate and the surface opposing the substrate in a central portion of the plate.

The applied references do not disclose or suggest the features of the present invention as defined by amended independent Claim 13. In particular, the applied references do not disclose or suggest, "forming textures on a surface of the substrate by using residues generated during etching and being chiefly composed of components of the substrate as an etching mask," as required by amended independent Claim 13.

As noted above, the object of the Marciniec invention is to evaluate cleanliness of silicon wafers (Id., col. 2, lines 13-18). Toward that end, Marciniec teaches a technique for observation of textured patterns by exposing silicon wafers to reactive plasma, in order to inspect contaminants and residues that are undesirably remaining on a substrate of the silicon wafers (*See, Marciniec, col. 1, lines 17 to 20*).

Marciniec discloses forming textured patterns on silicon wafers for evaluating contaminations and residues that exist on the silicon wafers; it is therefore clear

that these contaminants and residues are pre-formed on the substrate before etching the wafers by plasma texturing process (*See, Marciniec, col. 1, lines 15 to 51*).

In contrast, amended independent Claim 13 requires that the residues be generated during etching process..

Moreover, Marciniec discloses that the contaminants and residues include photoresists and inorganic and organic contaminants and residues (*See, Marciniec column 1, lines 48 to 51*), which do not correspond to components of the substrate.

In contrast, amended independent Claim 13 requires that the residues be generated during etching, and the residues being chiefly composed of components of the substrate.

Accordingly, Marciniec does not disclose or suggest then above features of the present invention as required by amended independent Claim 13.

The applied ancillary references Cain and Nishibayashi do not remedy the above-noted deficiencies of Marciniec.

According to the Office Action, Cain teaches a method of covering the substrate 96 to be etched with a plate 92 provided with a number of opening portions. (*See, Office Action, page 2*) ". However, referring to Figs 1 to 3 of Cain, the disclosed plate 92 of Cain is only a ground electrode (Fig. 1), and the opening portions function as gas inlets. Cain is silent about placing a plate facing the substrate with a predetermined distance between a pair of electrodes for generating plasma. Therefore, even if Marciniec is combined with Cain, it will neither teach a plate for covering the substrate 96, nor residues generated during etching.

Also, as discussed above, Marciniec merely discloses a technique for inspection of cleanliness of a substrate; as a result, one of ordinary skill in the art would not combine Marciniec with Cain. Moreover, even if the Marciniec invention

is deformed according to the Cain invention, the combination would still not disclose or suggest the “plate” of the present invention. Therefore the required “forming textures on a surface of the substrate by using residues that are generated during etching and being chiefly composed of components of the substrate as an etching mask”, would not be obvious based on such a combination.

The applied Nishibayashi reference only teaches a technique for smoothing a hard diamond-film. (*See, Nishibayashi Fig. 5, column 7, EMBODIMENT 4*), and is silent about forming textures by use of residues that are generated during etching.

The applied Gut reference only uses a plate 30 with holes for making etch rate uniform (*See, Gut, col. 2, lines 16 and 17*), and does not suggest forming textures by use of residues that are generated during etching.

Accordingly, Marciniec, Cain and Nishibayashi, alone or in combination fail to disclose or suggest the above features of the present invention.

Since the applied references fail to disclose, teach or suggest the above features recited in amended independent Claim 13, those references cannot be said to anticipate nor render obvious the invention which is the subject matter of that claim.

Accordingly, amended independent Claim 13 is believed to be in condition for allowance and such allowance is respectfully requested.

Applicant respectfully submits that amended independent Claim 20 is allowable for at least the same reasons as discussed above with reference to amended independent Claim 13 and such allowance is respectfully requested.

The remaining claims depend either directly or indirectly from amended independent Claims 13 and 20 and recite additional features of the invention which are neither disclosed nor fairly suggested by the applied references and are

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therefore also believed to be in condition for allowance.

Conclusion

In view of the foregoing, it is respectfully submitted that the application is in condition for allowance. Reexamination and reconsideration of the application, as amended, are requested.

If for any reason the Examiner finds the application other than in condition for allowance, the Examiner is requested to call the undersigned attorney at the Los Angeles, California telephone number (310) 785-4721 to discuss the steps necessary for placing the application in condition for allowance.

If there are any fees due in connection with the filing of this response, please charge the fees to our Deposit Account No. 50-1314.

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